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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------|------------------|
| 10/791,569 | 03/01/2004 | Takashi Ueno | 04104CIP/HG | 3119 |
| 1933 7590 01/04/2007 FRISHAUF, HOLTZ, GOODMAN & CHICK, PC 220 Fifth Avenue 16TH Floor NEW YORK, NY 10001-7708 | | | EXAMINER IP, SIKYIN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1742 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 31 DAYS | | 01/04/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/791,569

Applicant(s)

UENO, TAKASHI

Examiner

Sikyln Ip

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-46 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I is, claims 1, 4-8, 11-17, 20-25, and 44, drawn to metallic material products consisting of an alloy including Cu, Mo, and elements selected from the group consisting of Al, Au, Ag, Ti, Ni, Co, and Si.

Group II is, claims 2, 9, 18, and 45, drawn to metallic material products consisting of a "binary alloy" including Cu and Mo.

Group III is, claims 3, 10, 19, and 46, drawn to metallic material products consisting of an alloy including Cu and elements selected from the group consisting of Cr, Ta, W, and Ti and elements selected from the group consisting of Al, Au, Ni, Co, and Si.

Group IV is, claims 26, 38, 41, drawn to working method for etching metallic material consisting of an alloy including Cu, Mo, and elements selected from the group consisting of Al, Au, Ag, Ti, Ni, Co, and Si, the steps comprising "solution etching with phosphoric acid and nitric acid" to form a wiring pattern, an electrode, or a contact.

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Group V is, claims 27, 39, and 42, drawn to working method for etching metallic material consisting of a "binary alloy" including Cu and Mo, the steps comprising "solution etching with phosphoric acid and nitric acid" to form a wiring pattern, an electrode, or a contact.

Group VI is, claims 28, 40, and 43, drawn to working method for etching metallic material consisting of an alloy including Cu and elements selected from the group consisting of Cr, Ta, W, and Ti and elements selected from the group consisting of Al, Au, Ni, Co, and Si, the steps comprising "solution etching with phosphoric acid and nitric acid" to form a wiring pattern, an electrode, or a contact.

Group VII, claim 29, drawn to working method for etching metallic material consisting of an alloy including Cu, Mo, and elements selected from the group consisting of Al, Au, Ag, Ti, Ni, Co, and Si, the steps comprising "gas etching with hydrochloric acid" to form a wiring pattern, an electrode, or a contact.

Group VIII, claim 30, drawn to working method for etching metallic material consisting of a binary alloy including Cu, Mo, the steps comprising "gas etching with hydrochloric acid" to form a wiring pattern, an electrode, or a contact.

Group IX is, claim 31, drawn to working method for etching metallic material consisting of an alloy including Cu, Mo, and elements selected from the group consisting of Cr, Ta, W, and Ti and elements selected from the group consisting of Al, Au, Ni, Co, and Si, the steps comprising "gas etching with hydrochloric acid" to form a wiring pattern, an electrode, or a contact.

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Group X is, claim 32, drawn to manufacturing method of electronic component with a metallic film consisting of an alloy including Cu, Mo, and elements selected from the group consisting of Al, Au, Ag, Ti, Ni, Co, and Si, and a film other than said metallic film is gas etched under a gas atmosphere including fluorine.

Group XI is, claim 33, drawn to manufacturing method of electronic component with a metallic film consisting of a binary alloy including Cu, Mo, and a film other than said metallic film is gas etched under a gas atmosphere including fluorine.

Group XII is, claim 34, drawn to manufacturing method of electronic component with a metallic film consisting of an alloy including Cu, Mo, and elements selected from the group consisting of Cr, Ta, W, and Ti and elements selected from the group consisting of Al, Au, Ag, Ti, Ni, Co, and Si, and a film other than said metallic film is gas etched under a gas atmosphere including fluorine.

Group XIII is, claim 35, drawn to working method for etching metallic material consisting of an alloy including Cu, Mo, and elements selected from the group consisting of Al, Au, Ag, Ti, Ni, Co, and Si, the steps comprising heat treatment in the range of temperatures from 100 °C to 750 °C to form a wiring pattern, an electrode, or a contact.

Group XIV is, claim 36, drawn to working method for etching metallic material consisting of a binary alloy including Cu, Mo, the steps comprising heat treatment in the range of temperatures from 100 °C to 750 °C to form a wiring pattern, an electrode, or a contact.

Group XV is, claim 37, drawn to working method for etching metallic material consisting of an alloy including Cu, Mo, and elements selected from the group consisting of Cr, Ta, W, and Ti and elements selected from the group consisting of Al, Au, Ag, Ti, Ni, Co, and Si, the steps comprising heat treatment in the range of temperatures from 100 °C to 750 °C to form a wiring pattern, an electrode, or a contact.

The inventions listed as Groups I-XV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Claim 1 is obvious in view of JP 58-144557 accordingly the special technical features linking the groups does not provide a contribution over the prior art and no single inventive concept exists.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions

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unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).


Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
December 29, 2006